



ADVANCED HYDROLOGIC PREDICTION SERVICE

Hydrologic forecasting is critical to public safety and the economy. Three-quarters of all presidentially declared disasters are the result of flooding. Floods kill more people each year than any other severe weather. In an average year, more than 130 people are killed by flooding and flash flooding, and damages exceed \$3.5 billion.

National implementation of the Advanced Hydrologic Prediction Service (AHPS) will save lives and an estimated \$200 million per year in flood losses, and an additional \$400 million per year in economic benefits to water resource users.

AHPS will significantly improve river forecasts and management in the United States by providing a fourteen-day outlook and new forecast formats, including visual displays, which will assist local managers in making decisions on water management. The system includes a combination of software and hardware tools used to analyze data and create graphical displays of probability forecasts.

AHPS Helps the General Public

AHPS provides the general public with more river forecast information and information such as:

- how high the river will rise
- when the river will reach its peak
- where property will be flooded
- how long flooding will continue
- how long a drought will last

AHPS Helps Water Managers and City Officials

AHPS provides better information to water managers and city officials, helping them to make decisions such as:

- when and where to evacuate people from potential flood areas, thus saving more lives;
- when to move goods and industrial property from flooded areas, thus contributing to economic savings;
- how to utilize reservoir storage capacity to reduce flood impacts on people and businesses;
- when to reinforce levees and at what level, to help reduce damage to areas nearby

AHPS, by coordinating hydrologic forecast capabilities with advances in climate prediction, can provide water managers with statistical data useful in making difficult decisions about water allocation and economics when there is drought potential, such as:

- whether to release water from reservoirs in the spring or hold it for anticipated agricultural and industrial needs;
- how much water to release to agriculture needs during marginal precipitation years;
- how to price and manage water in the most cost effective manner;
- assessment of risks and potential economic impacts, when used in conjunction with sophisticated economic models.

AHPS accomplishes this through the application of new science which provides more accurate forecasts for flow conditions ranging from droughts to floods. AHPS provides more information in a timely and user-friendly manner, including visual products which can be posted on the web. This initiative, once it is broadly implemented, will help save lives and money.

Further information on Advanced Hydrologic Prediction Services may be obtained at <http://www.nws.noaa.gov/oh/ahps>.